

STATE OF NEW MEXICO
BEFORE THE SECRETARY OF THE ENVIRONMENT

IN THE MATTER OF THE APPLICATION
OF ROPER CONSTRUCTION, INC.
FOR AN AIR QUALITY PERMIT
NO. 9295, ALTO CONCRETE BATCH PLANT

No. ABQ 21-57(P)

**ROPER CONSTRUCTION, INC.'S
STATEMENT OF INTENT TO PRESENT REBUTTAL TECHNICAL TESTIMONY**

Roper Construction, Inc. ("Roper"), pursuant to 20.1.4.300 NMAC and the December 2, 2021 Scheduling Order, submits this Statement of Intent to Present Rebuttal Technical Testimony for the February 9, 2022, public hearing on Air Quality Permit Number 9295.

1. The name of the person filing the statement.

Roper Construction, Inc.

2. State whether the person filing the statement supports or opposes the draft permit.

Roper supports the draft permit.

3. Identify each witness, including the name, address, affiliation(s), and educational and work background.

Roper expects to offer the following technical witness at the hearing:

Paul Wade
Montrose Air Quality Services
3500 Comanche Road NE
Albuquerque, New Mexico 87107

Mr. Wade's qualifications and background are described in detail in Exhibit 1 to Roper's Statement of Intent to Present Technical Testimony, filed on January 19, 2022. In addition, Roper may call other witnesses in response to questions raised during the hearing or as rebuttal witnesses.

4. **Estimate the length of the direct testimony of each witness.**

Mr. Wade will summarize his written direct and rebuttal testimony. The summary is expected to take approximately 30 minutes.

5. **Identify all exhibits which are part of the Record Proper and, for exhibits not part of the Record Proper, attach a copy.**

Exhibit Description

Bates Number

Exhibit 3 – Paul Wade Rebuttal Testimony Roper – Air 00026 – 00048

6. **List all technical materials relied upon by each witness in making statement of technical of fact or opinion contained in the rebuttal testimony.**

- Roper Air Permit Application
- Environmental Protection Agency's Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources, Fifth Edition (AP-42 Emission Factors)
- Equipment Manufacturer's Specifications Including:
 - o WAM Silotop Zero Venting Filters (Baghouse) [AR 87, 0957]
- New Mexico Modeling Guidance [AR 7, 0250-0332]

7. **Attach the full rebuttal testimony of each technical witness**

A copy of Mr. Wade's written rebuttal testimony is attached to this statement as Exhibit 3.

Respectfully submitted,

MONTGOMERY & ANDREWS, P.A.

By: /s/ Louis W. Rose

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CERTIFICATE OF SERVICE

I hereby certify that on February 2, 2022, a true copy of the foregoing ***Roper Construction Inc.'s Statement of Intent to Present Rebuttal Technical Testimony*** was served via electronic mail to the following:

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/s/ Louis W. Rose
Louis W. Rose

**STATE OF NEW MEXICO
BEFORE THE SECRETARY OF THE ENVIRONMENT**

**IN THE MATTER OF THE APPLICATION
OF ROPER CONSTRUCTION, INC.
FOR AN AIR QUALITY PERMIT,
PERMIT NO. 9295, ALTO CONCRETE BATCH PLANT No. AQB 21-57(P)**

**REBUTTAL TESTIMONY OF PAUL WADE,
MONTROSE AIR QUALITY SERVICES, LLC
ON BEHALF OF ROPER CONSTRUCTION, INC.**

February 2, 2022

**Rebuttal Testimony of Paul Wade
Docket No. AQB 21-57(P)**

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Paul Wade. My business address is 3500G Comanche Road Northeast, Albuquerque, New Mexico 87107.

Q. ON WHOSE BEHALF ARE YOU SUBMITTING REBUTTAL TESTIMONY?

A. I am submitting this rebuttal testimony on behalf of Roper Construction Incorporated. (“Roper”)

Q. HAVE YOU PREVIOUSLY PROVIDED TESTIMONY IN THIS CASE?

A. Yes, I provided direct testimony, which includes: (1) a summary of my qualifications and experience; (2) a description of Roper’s proposed facility; (3) a discussion of the New Source Review (“NSR”) permit application process; (4) a discussion on the modeling completed for the permit application; and (5) Roper’s demonstrated compliance with applicable air quality regulations and ambient air quality standards at the facility. My direct testimony was submitted with Roper’s Statement of Intent, filed on January 19, 2022 as Exhibit 2.

II. PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A. The purpose of my rebuttal testimony is to respond to the direct testimony of the New Mexico Environment Department (“NMED”) and the Property Owners of Sonterra (“Sonterra”).

Q. HAVE YOU REVIEWED THE STATEMENTS OF INTENT TO PRESENT TECHNICAL TESTIMONY AND EXHIBITS FILED BY NMED AND SONTERRA?

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1 A. Yes.

III. REBUTTAL TO NMED TESTIMONY

3 Q. HAVE YOU REVIEWED THE PRE-FILED WRITTEN TESTIMONY OF
4 NMED'S DEEPIKA SAIKRISHNAN AND ERIC PETERS?

5 A. Yes.

6 Q. DO YOU HAVE ANY REBUTTAL REGARDING NMED'S TESTIMONY?

7 A. No. I agree with the testimony filed by NMED.

IV. REBUTTAL TO OPINIONS OF SONTERRA WITNESS DR. ITUARTE-VILLARREAL

10 **Q. HAVE YOU REVIEWED THE OPINIONS PRESENTED BY DR. CARLOS**
11 **ITUARTE-VILLARREAL?**

12 A. Yes.

13 **Q. DR. ITUARTE-VILLARREAL HAS AN OPINION THAT THE MODELING**
14 **CONDUCTED BY YOU IS UNRELIABLE AND CANNOT SUPPORT THE**
15 **REQUESTED PERMIT BECAUSE OF THE METEOROLOGICAL DATA USED.**
16 **DO YOU AGREE WITH THAT?**

17 A. No.

18 **Q. PLEASE EXPLAIN.**

19 A. Dr. Ituarte-Villarreal criticized the selection of meteorological data for the modeling and
20 suggested that the Sierra Blanca Regional Airport data is a better match. The
21 meteorological data was selected in collaboration with the NMED Modeling Section as
22 the best available and most representative meteorological data set. Because NMED
23 selected the meteorological data site, it is the one I used for modeling. Comparison of the

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1 two meteorological databases shows more low wind speeds for Holloman Air Force Base
2 than Sierra Blanca. Low winds lead to higher concentrations at the model boundary for
3 sources that are mostly low release volume sources such as at the proposed Roper
4 facility.

5 Further investigation using the Sierra Blanca Regional Airport data, as suggested by Dr.
6 Ituarte-Villarreal, for the years 2016-2020, produced modeled concentrations that were
7 less than those produced by using the Holloman Air Force Base data. Therefore, the
8 modeled results from Holloman Air Force Base were more conservative. Specifically,
9 this means that Roper's facility demonstrated compliance with ambient air quality
10 standards with the higher modeled concentrations using Holloman Air Force Base data.

11 The table below compares the results of the Holloman and Sierra Blanca models.

12 During my investigation on use of Sierra Blanca Regional Airport meteorological data,
13 the surface conditions used in creation of the Sierra Blanca Regional Airport
14 meteorological data set was updated to the area around the airport. These surface
15 conditions should represent the conditions at the Roper site.

16

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1

2

Table Comparison of Holloman and Sierra Blanca Airport Data

Pollutant, Time Period and Standard	Holloman Met Cumulative Concentration (µg/m3)	Sierra Blanca Met Cumulative Concentration (µg/m3)	Holloman - Sierra Blanca Met Percent Reduction
NO ₂ 1 Hour H8H	59.5	56.0	5.9%
NO ₂ Annual H1H SIL	0.87	0.82	5.7%
NO ₂ Annual Class II SIL	0.87	0.82	5.7%
CO 1 Hour H1H SIL	50.5	22.2	56.0%
CO 8 Hour H1H SIL	12.8	6.7	47.7%
SO ₂ 1 Hour H1H SIL	0.64	0.28	56.3%
SO ₂ 3 Hour H1H SIL	0.24	0.18	25.0%
SO ₂ 24 Hour H1H SIL	0.07	0.04	42.9%
SO ₂ Annual H1H SIL	0.01	0.009	10.0%
PM _{2.5} 24 Hour H8H	19.0	18.0	5.3%
PM _{2.5} Annual H1H	7.25	6.39	11.9%
PM ₁₀ 24 Hour H2H	124.6	117.0	6.1%
PM ₁₀ 24 Hour Class II	29.8	22.3	25.2%
PM ₁₀ Annual Class II	11.9	6.8	42.9%

3

4 **Q. HAS YOUR OPINION CHANGED BASED ON DR. ITUARTE-VILLARREAL’S**
5 **OPINION OF THE METEOROLOGICAL DATA?**

6 A. No. My opinion about the modeling completed for the application has not changed. It
7 has instead been further bolstered knowing that use of the Holloman Air Force Base data
8 results in a more conservative estimate of modeled concentrations and even under these
9 conditions that application demonstrates compliance with applicable air quality
10 regulations and ambient air quality standards.

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**Q. DR. ITUARTE-VILLARREAL’S OPINIONS INCLUDE AN OPINION THAT
THE INCCORECT VERSION OF AERMET AND AERMOD WERE USED IN
CONDUCTING THE MODELING. DO YOU AGREE?**

A. No.

Q. PLEASE EXPLAIN.

A. The modeling for this application was completed in April 2021. The modeling was completed using AERMET and AERMOD Version 19191. AERMET and AERMOD Version 21112 was not issued by EPA until mid-April 2021. It became available to me through my modeling software, BEEST, on June 11, 2021. At the time I completed the modeling, I was using the most recent version of the modeling software. The modeling was submitted to NMED for review. NMED did not object to the use of Version 19191 for the application. Further, I have reviewed the changes between Version 19191 and 21112 and have concluded that they do not include any updates that would have any affect in the modeling results for this application.

**Q. DID YOU DO ADDITIONAL MODELING TO SUPPORT YOUR CONCLUSION
THAT THERE WOULD BE NO DIFFERENCES IN MODELED
CONCENTRATIONS BETWEEN AERMOD AND AERMET VERSIONS 19191
AND 21112?**

A. Yes. I updated the AERMET data to Version 21112 and re-ran the model on AERMOD Version 21112 and the results did not change from Version 19191. Therefore, regardless of whether the modeling was completed on Version 19191 or Version 21112, the modeling results were the same.

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**Q. DR. ITUARTE-VILLARREAL’S OPINIONS INCLUDE AN OPINION THAT
MULTIPLE EMISSION SOURCES WERE NOT INCLUDED IN THE
MODELING. DO YOU AGREE?**

A. No.

Q. PLEASE EXPLAIN.

A. Dr. Ituarte-Villarreal identified missing haul road emissions from truck trips used to deliver cement, fly ash, aggregate material, sand material, transportation of concrete product, water trucks, and street sweepers as missing from modeling. Dr. Ituarte-Villarreal, however, misunderstands Draft Permit Condition A112. [AR 10, 0366-67] At Roper’s request, this permit condition includes limits on the number of trips on the haul roads to 305 round trips per day. Further, this condition does not discriminate between the types of haul road trips that may be taken, whether they are water, product delivery, or raw materials, the condition applies regardless. Therefore, these “additional” emission sources that Dr. Ituarte-Villarreal identifies were in fact identified and modeled as part of the 305 rounds trips per day.

Roper is required to maintain records of the number of haul road trips per day. Once Roper has reached the maximum number of trips per day, operations must cease.

**Q. DR. ITUARTE-VILLARREAL’S OPINIONS INCLUDE AN OPINION THAT
THE PM10 AND PM2.5 MODELS WERE NOT UPDATED TO ACCOUNT FOR
REVISIONS TO HAUL ROAD EMISSIONS LISTED IN TABLE 2-E. DO YOU
AGREE?**

A. No.

Q. PLEASE EXPLAIN.

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1 A. The revision to the PM10 and PM2.5 haul road emissions in Table 2-E was a reduction in
2 emissions by one-half. NMED does not require that modeling be performed to reflect
3 changes in emissions when the original modeling used higher emissions and resulted in
4 higher concentrations than a revision would. The originally modeled concentrations are,
5 therefore, more conservative than modeling using the revised emission rates.

6 **Q. DR. ITUARTE-VILLARREAL’S OPINIONS INCLUDE AN OPINION THAT**
7 **“NON-DEFAULT” MODELING OPTIONS IN AERMET ARE NOT NMED**
8 **APPROVED. DO YOU AGREE?**

9 A. No.

10 **Q. PLEASE EXPLAIN.**

11 A. Dr. Ituarte-Villarreal asserts that “non-default” options, such as particle densities and use
12 of meteorological data, was not approved by the agency because the modeling protocol
13 submitted to NMED in April 2021, was never approved. Dr. Ituarte-Villarreal did not
14 consider that modeling protocols are not required to be submitted for minor source
15 permits. The NMED encourages submission of modeling protocols even when not
16 required. [AR 7, 0317] NMED Air Dispersion Modeling Guidelines, October 2020, Sec.
17 6.1 Submittal of Modeling Protocol. Roper submitted a protocol based on this reasoning.
18 Because there is no requirement for a modeling protocol for a minor source, there is no
19 requirement for NMED to approve such a protocol, even if one is voluntarily submitted.
20 NMED thoroughly reviewed all options used in the model. No non-default options were
21 used. NMED even provided the recommendation for the meteorological data to be used
22 (Holloman Air Force Base).

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1 The particle densities I used in the modelling were the NMED approved values, with the
2 exception of cement. For cement, I used the particle density for lime, which is in error.
3 The particle density for lime is 3.3 g/cm³. The particle density for cement is 2.85 g/cm³.
4 The density of the material will allow for particle dropout the heavier the particle weighs.
5 In this case, I expect lower concentrations at the boundary where the highest PM₁₀
6 concentrations occurred would be lower since less particles had dropped out. I ran the
7 models for PM₁₀ with the corrected particle density and the modeled concentration went
8 down slightly. Therefore, the particle density for lime resulted in a more conservative
9 result. If NMED did not approve of the modeling options used, based on my experience,
10 they likely would have discussed this with me and requested revisions to the modeling.

11 **Q. DR. ITUARTE-VILLARREAL'S OPINIONS INCLUDES AN OPINION THAT**
12 **THE SELECTION AND USE OF PARTICLE DENSITY PARAMETERS HAVE**
13 **NOT BEEN JUSTIFIED. DO YOU AGREE?**

14 A. No.

15 **Q. PLEASE EXPLAIN.**

16 A. The particle density parameters I relied on are the NMED approved values, with the
17 exception of cement, which is discussed above. Use of NMED approved values requires
18 no justification for their use. This information is specified in both the modeling protocol
19 submitted with the application, as well as in application Section 16-M.

V. REBUTTAL TO SONTERRA WITNESS BRIANNA BERNAL

21 **Q. HAVE YOU REVIEWED THE OPINIONS PRESENTED BY MS. BRIANNA**
22 **BERNAL?**

23 A. Yes.

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Q. MS. BERNAL’S OPINIONS INCLUDE AN OPINION THAT YOU DID NOT ACCURATELY REPRESENT THE MODELING OPTIONS USED. DO YOU AGREE?

A. No.

Q. PLEASE EXPLAIN.

A. As discussed above, when the models were run in April and May 2021, AERMOD Version 19191 and AERMET Version 19191 were the latest approved versions available. The updates to AERMOD and AERMET Version 21112 did not have an effect on the modeling results. Ms. Bernal also did not point to any changes to the models that would alter the modeling results. To verify my statements, I completed a re-run of the models in AERMOD and AERMET Version 21112, and there were no changes to the modeling results.

Ms. Bernal also points out that flat terrain options were used in the modeling. This is true, flat terrain options were used because NMED requires flat terrain options to be used for volume sources, for these types of facilities. These types of facilities typically result with the highest concentrations of particulate on the fenceline where travel distances are not affected by complex terrain. Complex terrain was used in the modeling for all point sources. NMED Modeling guideline specify that “Flat terrain should be used if the source base is higher than all the surrounding terrain or if the facility consists primarily of non-buoyant fugitive sources.” *See* [AR 7, 0302-03] NMED Modeling Guidelines, Sec. 4.5.1, Terrain Use.

Q. MS. BERNAL’S OPINIONS INCLUDE AN OPINION THAT THE INCORRECT VERSION OF AERMOD WAS USED. DO YOU AGREE?

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1 A. No.

2 **Q. PLEASE EXPLAIN.**

3 A. As I discussed above, when the models were run in April and May 2021, AERMOD
4 Version 19191 and AERMET Version 19191 were the latest versions available. The
5 updates to AERMOD and AERMET Version 21112 did not include updates that would
6 have affected the Roper modeling results. My re-run of the models in AERMOD and
7 AERMET Version 21112 did not yield any change in results from Version 19191.
8 Therefore, the Version 19191 results are reliable.

9 **Q. MS. BERNAL'S OPINIONS INCLUDE AN OPINION THAT THE OPERATING**
10 **SCHEDULES ARE NOT REPRESENTED CONSISTENTLY THROUGHOUT**
11 **THE OPERATION. DO YOU AGREE?**

12 A. No.

13 **Q. PLEASE EXPLAIN.**

14 A. The maximum annual operating schedule in Section 1-E represents just that, the
15 *maximum* annual operating hours of the facility requested by the applicant if the facility
16 ran at maximum hourly production rate and the maximum daily production limit. The
17 operating hours used in the model are based on Section 16-K for particulate sources and
18 the requested daily operating periods. While it is true that the maximum annual hours of
19 operation (found in Section 1-E) based on the maximum hourly production rate and
20 maximum daily production limits do not equal the maximum numbers of hours the
21 facility can run, neither of these hours of operation were used to determine any emission
22 rates for concrete production. In the draft permit, the allowable operations limited are the
23 hourly production rate, daily production rate, annual production rate, and hours of

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1 operation the facility can run within a day. For combustions sources, the models were
2 run as if they operated 24 hours per day, 365 days per year, even though Roper does not
3 expect to operate the Facility on that schedule. As a result, the modeling emissions are
4 higher (and perhaps, substantially higher) than the expected emissions and the modeled
5 impact from those emissions is conservative and overestimates the expected actual
6 impact.

7 **Q. MS. BERNAL’S OPINIONS INCLUDE AN OPINION THAT THE**
8 **APPLICATION IS INCOMPLETE BECAUSE THERE IS NO MALFUNCTION**
9 **EMISSION LIMIT PERMITTED OR PREPARED FOR THE APPLICATION.**
10 **DO YOU AGREE?**

11 A. No.

12 **Q. PLEASE EXPLAIN.**

13 A. In Section 3 of the application it states, “No SSM emissions are predicted for this permit
14 application. All control systems will be operational prior to the start or shutdown of
15 concrete production.” There are no expectations of malfunctions of this equipment.
16 Roper did not request separate requirements during malfunctions. Even if there are
17 malfunctions, under the draft permit, Roper is required to meet emission limits; there are
18 no exceptions to this requirement.

19 **Q. MS. BERNAL’S OPINIONS INCLUDE AN OPINION THAT THE WEIGHTED**
20 **AVERAGE MOISTURE CONTENT FOR SAND AND GRAVEL IS STATED TO**
21 **BE 2.65%. DO YOU AGREE?**

22 A. No.

23 **Q. PLEASE EXPLAIN.**

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1 A. The formula in Section 6, pages 2 and 8 is in error. It should read, “The weighted
2 average moisture content for sand and aggregate is 2.65%
3 $((1.77*118.8+4.17*68.8)/187.5)$.” While this was a typographical error in Section 6, the
4 correct formula was used in the emission calculations found in Section 7. Therefore, the
5 emission calculations are correct. A corrected Section 6, Pages 2 and 8 have been
6 submitted to NMED addressing this error.

7 **Q. MS. BERNAL’S OPINIONS INCLUDE AN OPINION THAT IT IS IMPROPER**
8 **TO USE HOURLY EMISSION FACTORS INSTEAD OF ANNUAL EMISSION**
9 **FACTORS. DO YOU AGREE?**

10 A. No.

11 **Q. PLEASE EXPLAIN.**

12 A. The annual emissions calculated in Table 6-1 are the uncontrolled emissions if the facility
13 ran 8,760 hours per year prior to controls. These emissions are used to determine the
14 type of permit the facility is required to obtain. Annual emission rates for controlled
15 emission, after inclusion of control equipment, are based on an annual production rate of
16 500,000 cubic yards of concrete produced per year.

17 **Q. MS. BERNAL’S OPINIONS INCLUDE AN OPINION THAT THE MAXIMUM**
18 **HAUL TRUCK EMISSIONS ARE NOT SUPPORTED. DO YOU AGREE?**

19 A. No.

20 **Q. PLEASE EXPLAIN.**

21 A. The original application predicted haul road emissions based on an error in the
22 calculations for miles traveled by trucks traveling on the site. The error was in doubling
23 the mileage each truck would travel. When the doubling of mileage was corrected, the

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1 particulate emission rate was reduced by one half. The error was corrected in the
2 November 2021 submittal.

3 **Q. MS. BERNAL'S OPINIONS INCLUDE AN OPINION THAT AVERAGE**
4 **PARTICLE DENSITIES WERE NOT JUSTIFIED. DO YOU AGREE?**

5 A. No.

6 **Q. PLEASE EXPLAIN.**

7 A. As discussed above, I used the NMED-approved particle densities. As I understand it, if
8 I am using NMED approved values, no further justification is required. This information
9 is specified in both the modeling protocol submitted with the application as well as in
10 application Section 16-M.

11 **Q. MS. BERNAL'S OPINIONS INCLUDE AN OPINION THAT THE DENSITY**
12 **VALUE OF CEMENT USED IN THE APPLICATION IS IN ERROR. DO YOU**
13 **AGREE?**

14 A. Yes.

15 **Q. PLEASE EXPLAIN.**

16 A. As discussed above, I used an incorrect particle density for cement. I used the value for
17 lime, not cement. The particle density for cement is 2.85 g/cm³. The particle density for
18 lime is 3.3 g/cm³. In this case, the use of a lower particle density in the model should
19 result in lower concentrations at the boundary, where the highest PM10 concentrations
20 occurred. I reran the models for PM10 with the corrected particle density. The
21 concentration went down slightly. Therefore, the particle density for lime resulted in a
22 more conservative (higher) result.

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1 **Q. MS. BERNAL’S OPINIONS INCLUDE AN OPINION THAT THE DENSITY**
2 **VALUE FOR FUGITIVE DUST ON ROADS WAS NOT JUSTIFIED. DO YOU**
3 **AGREE?**

4 A. No.

5 **Q. PLEASE EXPLAIN.**

6 A. As discussed above, I used the NMED approved particle densities. In my opinion, using
7 NMED approved values does not require further justification for their use. This
8 information is specified in both the modeling protocol submitted with the application as
9 well as in application Section 16-M.

10 **Q. MS. BERNAL’S OPINIONS INCLUDE AN OPINION THAT MULTIPLE**
11 **EMISSION SOURCES WERE NOT LISTED IN SECTION 16-O OF THE**
12 **APPLICATION. DO YOU AGREE?**

13 A. No.

14 **Q. PLEASE EXPLAIN.**

15 A. First, Ms. Bernal asserts that Question 3 of Section 16-O of the application is not
16 answered. Ms. Bernal is mistaken because Question 3 is answered in Section 16-O and
17 the answer is marked as “No”.
18 Next, there are no missing units from Section 16-O of the application. Unit 12 is
19 composed of the three heaters and is only formally split out to Units 12, 13, and 14 in
20 Section 2 of the application. When the modeling and emission calculations were
21 completed, all three heaters were calculated as one in Unit 12. In Section 16-O, the Unit
22 12 designation includes Units 12, 13, 14; therefore, there are no missing units in Section
23 16-O.

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1 **Q. MS. BERNAL’S OPINIONS INCLUDE AN OPINION THAT THE**
2 **APPLICATION INCORRECTLY STATES THE TYPE OF MODELING USED.**
3 **DO YOU AGREE?**

4 A. No.

5 **Q. PLEASE EXPLAIN.**

6 A. Complex terrain modeling was used for all sources, except those volume sources, where
7 NMED requires the use of flat terrain.

8 **Q. MS. BERNAL’S OPINIONS INCLUDE AN OPINION THAT THE**
9 **PARTICULATE MATTER MODELS USED ARE OUT OF DATE. DO YOU**
10 **AGREE?**

11 A. No.

12 **Q. PLEASE EXPLAIN.**

13 A. As discussed above, the revision to the PM10 and PM2.5 haul road emissions was a
14 reduction by one-half. NMED does not require that revised modeling be performed when
15 the original modeling resulted in higher concentrations than a revision would. The
16 originally modeled emission rates will therefore be more conservative than the revised
17 rates.

18 **VI. REBUTTAL TO SONTERRA WITNESS ELUID MARTINEZ**

19 **Q. HAVE YOU REVIEWED THE OPINIONS PRESENTED BY MR. ELUID**
20 **MARTINEZ?**

21 A. Yes.

22 **Q. MR. MARTINEZ’S OPINIONS INCLUDE AN OPINION THAT WATER**
23 **TRUCKS ARE NOT INCLUDED IN THE APPLICATION. DO YOU AGREE?**

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1 A. No.

2 **Q. PLEASE EXPLAIN.**

3 A. As discussed above, Draft Permit Condition A112 regulates the number of truck trips on
4 haul roads to 305 trucks per day. [AR 10, 0366-67] This condition was included in the
5 modeling. Further, it is my understanding that this condition includes all haul road
6 vehicles and does not exclude any haul road trips that may be taken, whether they are
7 water, product delivery, or raw materials. Therefore, all the truck trips, including water
8 deliveries, are modeled as part of the 305 rounds trips per day.

9 Roper is required to maintain records of the number of haul road trips per day. Once
10 Roper has reached the maximum number of trips per day, operations must cease.

11 **VII. REBUTTAL TO SONTERRA WITNESS DAVID PAUL EDLER**

12 **Q. HAVE YOU REVIEWED THE OPINIONS PRESENTED BY MR. DAVID PAUL**
13 **EDLER?**

14 A. Yes.

15 **Q. MR. EDLER'S OPINIONS INCLUDE AN OPINION THAT A 99.9% CONTROL**
16 **EFFICIENCY FOR A BAGHOUSE IS UNREALISTIC. DO YOU AGREE?**

17 A. No.

18 **Q. PLEASE EXPLAIN.**

19 A. Typically, the new filters that are installed in a baghouse have a manufacturer control
20 efficiency of 99.99%. This information was presented in Section 7 of the application.
21 For the Roper application, I only used a 99.9% control efficiency, making the emission
22 calculations more conservative (higher) by a factor of 10.

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**Q. MR. EDLER'S OPINIONS INCLUDE AN OPINION THAT THE NMED
DEFAULT WINDSPEED DOES NOT COMPORT WITH ACTUAL WIND
CONDITIONS. DO YOU AGREE?**

A. No.

Q. PLEASE EXPLAIN.

A. To determine maximum hourly emissions for sources using emission equation AP-42, 13.2.4, NMED requires the use of a windspeed 11 MPH. For model input, the emissions were calculated based on the average wind speed of Ruidoso or Sierra Blanca Regional Airport (KSRR). Sierra Blanca Regional Airport is approximately 8 miles east of the Roper site off Highway 220. Therefore, the windspeeds used in the modeling were localized windspeeds and are representative of the area.

**Q. MR. EDLER'S OPINIONS INCLUDE AN OPINION THAT ROPER'S FAILURE
TO IMPLEMENT EMISISON CONTROLS FOR THE AGGREGATE
HANDLING AND STORAGE PILES WILL CAUSE SIGNIFICANT FUGITIVE
DUST EMISSIONS. DO YOU AGREE?**

A. No.

Q. PLEASE EXPLAIN.

A. Emissions from the aggregate handling and storage piles are subject to Draft Permit Condition A502A, which requires added moisture with a wet dust suppression system or water added to the storage piles. [AR 10, 0369] For the aggregate storage piles, no controls were used in the calculations for both uncontrolled and controlled hourly emissions. These uncontrolled hourly emission rates were used in the modeling analysis. Any addition of moisture on the aggregate storage piles will decrease the predicted

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1 concentrations in the modeling analysis for particulate matter concentrations.

2 Additionally, Draft Permit Condition A502B requires the site minimize fugitive
3 emissions. [AR 10, 0370] There is no basis to state that Roper will not implement these
4 controls. If Roper is unable to add moisture to the aggregate storage piles to reduce
5 fugitive emissions, then Roper is not permitted to operate.

6 **Q. MR. EDLER'S OPINIONS INCLUDE AN OPINION THAT FUGITIVE DUST**
7 **CANNOT BE CONTROLLED BY A CENTRAL DUST CONTROL SYSTEM. DO**
8 **YOU AGREE?**

9 A. No.

10 **Q. PLEASE EXPLAIN.**

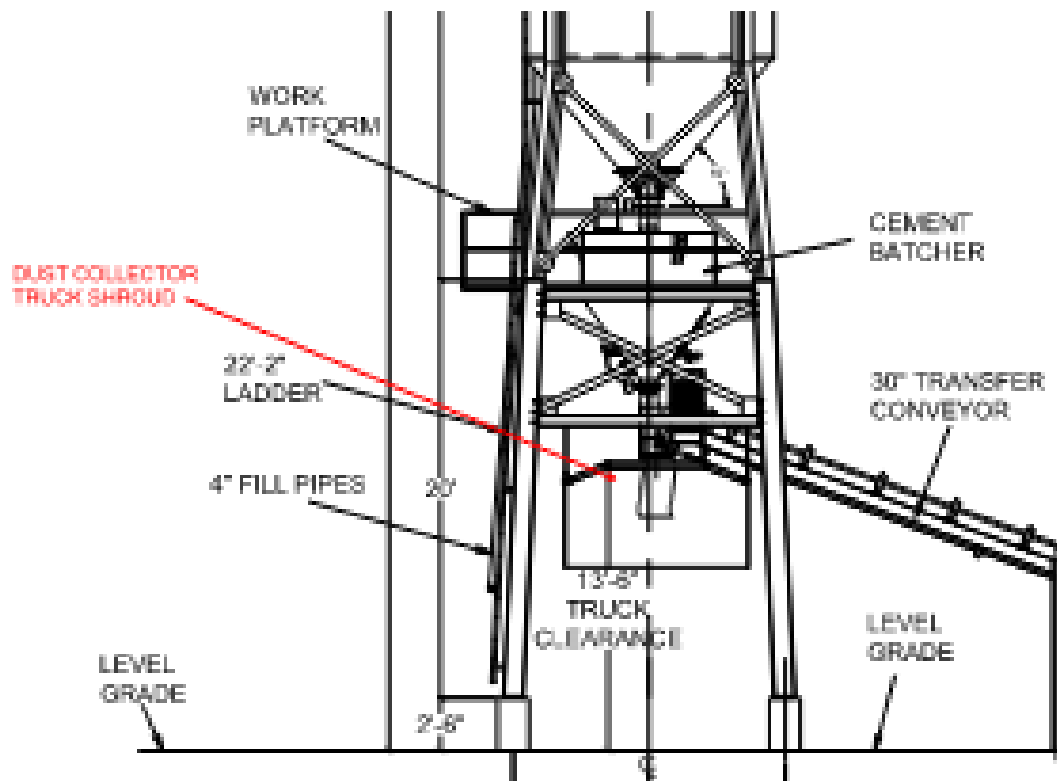
11 A. The central dust control system is in fact the baghouse located in the truck loading area.
12 The concrete truck loading emissions are based on AP-42 Section 11.12 Uncontrolled
13 Truck Loading and a baghouse control efficiency of 99.9%. If no baghouse was
14 installed, the fugitive emissions from loading the concrete truck would not be controlled.
15 With the installation of a central dust control system, these fugitive emissions are
16 captured and run through the baghouse filters where it is controlled.

17 A central dust collector is a control device designed to create a negative pressure at a dust
18 source point and pull the fugitive material into the collector, similar to a vacuum cleaner.
19 Dust is filtered out of the collector air stream and dropped into the hopper at the bottom
20 of the unit so it can be pneumatically sent to the cement silo.

21 For this application, the central baghouse controls both the truck loading area and the
22 cement/fly ash batcher. The central dust collector is designed by the manufacturer to
23 ensure air containing dust flows efficiently into and through the collector, and clean air is

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1 processed out of the unit. For truck loading, the concrete truck backs into an enclosed
2 area where the aggregate, cement, fly ash and water are added into the concrete truck.
3 The enclosed area is designed to be able to capture any fugitive dust generated during
4 truck loading through the baghouse filters. For this facility, the central dust collector is
5 rated at least 4,500 actual cubic feet per minute. The figure below presents a layout of
6 the truck loading area.



7
8 A concrete truck is backed into the concrete loading area under a 3-sided dust collector
9 truck shroud. The loading boot under the shroud is positioned into the concrete truck
10 opening where the aggregate, cement, fly ash, and water are added into the concrete
11 truck. During this time the central dust collector will, using negative pressure, suck the
12 air out from inside the shroud area capturing any fugitive dust that may be emitted from
13 the truck opening during loading of materials. This air is filtered through the central dust

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1 collector baghouse and the clean air is emitted into the atmosphere. The control
2 efficiency of the baghouse is a minimum of 99.9% effective. Particles captured in the
3 dust collector baghouse hopper will be pneumatically sent to the cement silo. At the
4 cement silo, the air used in the transfer will be controlled by the cement silo baghouse.

5 **Q. MR. EDLER'S OPINIONS INCLUDE AN OPINION THAT THE OPERATIONAL**
6 **PLAN TO MITIGATE EMISSIONS IN THE APPLICATION INCORRECTLY**
7 **IDENTIFIES ASPHALT PRODUCTION INSTEAD OF CONCRETE**
8 **PRODUCTION. DO YOU AGREE?**

9 A. Yes.

10 **Q. PLEASE EXPLAIN.**

11 A. Mr. Edler is correct. This is a typographical error and should read, "Upon malfunction
12 where excess particulate emissions are observed from the feeder bin exit enclosures or
13 water sprays, concrete drum mixer, drum mixer dust collector, scalping screen and pug
14 mill water sprays, mineral filler silo dust collector, and baghouse loadout enclosure and
15 watering, all concrete production will cease until repairs to control equipment are made."
16 No asphalt will be produced at the Roper facility. I have submitted a correction to that
17 discussion in Section 14.

18 **Q. MR. EDLER'S OPINIONS INCLUDE AN OPINION THAT THE APPLICATION**
19 **IS INCOMPLETE BECAUSE IT DOES NOT IDENTIFY THE CLEANING**
20 **OPERATIONS THAT ARE NECESSARY AT A CONCRETE BATCH PLANT.**
21 **DO YOU AGREE?**

22 A. No.

23 **Q. PLEASE EXPLAIN.**

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1 A. NMED does not require cleaning operations to be included in the permit application. It is
2 not normally a source of emissions. Any truck washout will use water to wash out the
3 trucks. The material washed out from the trucks will be saturated and should not be a
4 source of fugitive emissions. Draft Permit Condition A502B requires minimizing any
5 emissions from this operation, if they exist. [AR 9, 0370] Therefore, the application and
6 draft permit address this concern.

7 **VIII. MISCELLANEOUS REBUTTAL**

8 **Q. SONTERRA INCLUDES THE CURRENT TIER I BACT REQUIREMENTS FOR**
9 **TCEQ, DATED JANUARY 2021 IN ITS STATEMENT OF INTENT. HOW ARE**
10 **THESE BACT REQUIREMENTS RELEVANT TO THE REVIEW OF ROPER'S**
11 **APPLICATION?**

12 A. The Texas Tier I BACT requirements are guidelines for Texas concrete batch plants. A
13 review of these guidelines shows that the Roper facility, as permitted, would meet or
14 exceed the requirements to operate in Texas, with the exception of the 5000 acfm flow
15 rate of the baghouse. The capacity of the baghouse flow rate is designed for this 125
16 cubic yards per hour concrete batch plant by the manufacturer at 4500 acfm.

17 **Q. DO ANY OF SONTERRA'S OPINION'S OR EXHIBITS CHANGE YOUR VIEW**
18 **ON WHETHER OR NOT THE ROPER PERMIT SHOULD BE ISSUED?**

19 A. No. The permit application, including the modeling demonstrates that the Roper facility
20 will comply with applicable air quality regulations and will not cause or contribute to any
21 exceedances of ambient air quality standards or PSD Class I or Class II increments.
22 NMED's proposed permit conditions will reduce potential emissions from the Roper

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1 facility to levels less than what was modeled to show compliance with ambient air quality
2 standards.

3 **IX. CONCLUSION**

4 **Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?**

5 A. Yes.